SEQUENCE LISTING

<110> Takara Shuzo Co., Ltd.

<120> A gene encoding ceramidase

<130> 00-011-PCT

<140> JP 11/84743
<141> 1999-3-26

<160> 18

<210> 1
<211> 21
<212> PRT
<213> Mouse

<220>
<222> 7, 9, 13
<223> Xaa is an unknown amino acid.

<400> 1

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Lys Val Asn Asp Ile Asn
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<210> 2

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<211> 10

<212> PRT

<213> Mouse

<220>

<222> 9

<223> Xaa is an unknown amino acid.

<400> 2

Ala Ile Ala Thr Asp Thr Val Ala Xaa Met

1   5   10

<210> 3

<211> 35

<212> PRT

<213> Mouse

<220>

<222> 29, 30

<223> Xaa is an unknown amino acid.

<400> 3

Gly Tyr Leu Pro Gly Gln Gly Pro Phe Val Asn Gly Phe Ala Ser

1   5   10   15

Ser Asn Leu Gly Asp Val Ser Pro Asn Ile Leu Gly Pro Xaa Xaa

           20   25   30

Val Asn Thr Gly Glu

           35

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<210> 4

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthesized oligonucleotide for primer.

<220>

<222> 6, 9, 15

<223> "n" is G or A or T or C.

<400> 4

carggnccnt tygtngc   17

<210> 5

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthesized oligonucleotide for primer.

<220>

<222> 3, 6, 15

<223> "n" is G or A or T or C.

<400> 5

ggnccnagda trttngg   17

<210> 6

<211> 38

<212> DNA

<213> Mouse

<400> 6

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<210> 7

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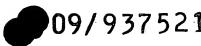<223> Synthesized oligonucleotide for primer.

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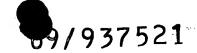

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<212> DNA

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<400> 11

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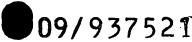
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<210> 12

<211> 2271

<212> DNA

<213> Mouse

<400> 12

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<210> 13

<211> 756

<212> PRT

<213> Mouse

<400> 13

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                 20                  25                  30
Leu Phe Val Thr Ser Gly Thr Ile Glu Asn His Lys Asp Ser Gly
                 35                  40                  45
Asn His Trp Phe Ser Thr Thr Leu Gly Ser Thr Thr Thr Gln Pro
                 50                  55                  60
Pro Pro Ile Thr Gln Thr Pro Asn Phe Pro Ser Phe Arg Asn Phe
                 65                  70                  75
Ser Gly Tyr Tyr Ile Gly Val Gly Arg Ala Asp Cys Thr Gly Gln
```

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```
                 80                   85                   90
Val Ser Asp Ile Asn Leu Met Gly Tyr Gly Lys Asn Gly Gln Asn
                 95                  100                  105
Ala Arg Gly Leu Leu Thr Arg Leu Phe Ser Arg Ala Phe Ile Leu
                110                  115                  120
Ala Asp Pro Asp Gly Ser Asn Arg Met Ala Phe Val Ser Val Glu
                125                  130                  135
Leu Cys Met Ile Ser Gln Arg Leu Arg Leu Glu Val Leu Lys Arg
                140                  145                  150
Leu Glu Ser Lys Tyr Gly Ser Leu Tyr Arg Arg Asp Asn Val Ile
                155                  160                  165
Leu Ser Ala Ile His Thr His Ser Gly Pro Ala Gly Phe Phe Gln
                170                  175                  180
Tyr Thr Leu Tyr Ile Leu Ala Ser Glu Gly Phe Ser Asn Arg Thr
                185                  190                  195
Phe Gln Tyr Ile Val Ser Gly Ile Met Lys Ser Ile Asp Ile Ala
                200                  205                  210
His Thr Asn Leu Lys Pro Gly Lys Ile Phe Ile Asn Lys Gly Asn
                215                  220                  225
Val Ala Asn Val Gln Ile Asn Arg Ser Pro Ser Ser Tyr Leu Leu
                230                  235                  240
Asn Pro Gln Ser Glu Arg Ala Arg Tyr Ser Ser Asn Thr Asp Lys
                245                  250                  255
Glu Met Leu Val Leu Lys Leu Val Asp Leu Asn Gly Glu Asp Leu
                260                  265                  270
Gly Leu Ile Ser Trp Phe Ala Ile His Pro Val Ser Met Asn Asn
                275                  280                  285
Ser Asn His Phe Val Asn Ser Asp Asn Met Gly Tyr Ala Ala Tyr
                290                  295                  300
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Leu Phe Glu Gln Glu Lys Asn Lys Gly Tyr Leu Pro Gly Gln Gly
                305             310             315
Pro Phe Val Ala Gly Phe Ala Ser Ser Asn Leu Gly Asp Val Ser
                320             325             330
Pro Asn Ile Leu Gly Pro His Cys Val Asn Thr Gly Glu Ser Cys
                335             340             345
Asp Asn Asp Lys Ser Thr Cys Pro Asn Gly Gly Pro Ser Met Cys
                350             355             360
Met Ala Ser Gly Pro Gly Gln Asp Met Phe Glu Ser Thr His Ile
                365             370             375
Ile Gly Arg Ile Ile Tyr Gln Lys Ala Lys Glu Leu Tyr Ala Ser
                380             385             390
Ala Ser Gln Glu Val Thr Gly Pro Val Leu Ala Ala His Gln Trp
                395             400             405
Val Asn Met Thr Asp Val Ser Val Gln Leu Asn Ala Thr His Thr
                410             415             420
Val Lys Thr Cys Lys Pro Ala Leu Gly Tyr Ser Phe Ala Ala Gly
                425             430             435
Thr Ile Asp Gly Val Ser Gly Leu Asn Ile Thr Gln Gly Thr Thr
                440             445             450
Glu Gly Asp Pro Phe Trp Asp Thr Leu Arg Asp Gln Leu Leu Gly
                455             460             465
Lys Pro Ser Glu Glu Ile Val Glu Cys Gln Lys Pro Lys Pro Ile
                470             475             480
Leu Leu His Ser Gly Glu Leu Thr Ile Pro His Pro Trp Gln Pro
                485             490             495
Asp Ile Val Asp Val Gln Ile Val Thr Val Gly Ser Leu Ala Ile
                500             505             510
Ala Ala Ile Pro Gly Glu Leu Thr Thr Met Ser Gly Arg Arg Phe
```

```
                515                 520                 525
      Arg Glu Ala Ile Lys Lys Glu Phe Ala Leu Tyr Gly Met Lys Asp
                530                 535                 540
      Met Thr Val Val Ile Ala Gly Leu Ser Asn Val Tyr Thr His Tyr
                545                 550                 555
      Ile Thr Thr Tyr Glu Glu Tyr Gln Ala Gln Arg Tyr Glu Ala Ala
                560                 565                 570
      Ser Thr Ile Tyr Gly Pro His Thr Leu Ser Ala Tyr Ile Gln Leu
                575                 580                 585
      Phe Arg Asp Leu Ala Lys Ala Ile Ala Thr Asp Thr Val Ala Asn
                590                 595                 600
      Met Ser Ser Gly Pro Glu Pro Pro Phe Phe Lys Asn Leu Ile Ala
                605                 610                 615
      Ser Leu Ile Pro Asn Ile Ala Asp Arg Ala Pro Ile Gly Lys His
                620                 625                 630
      Phe Gly Asp Val Leu Gln Pro Ala Lys Pro Glu Tyr Arg Val Gly
                635                 640                 645
      Glu Val Val Glu Val Ile Phe Val Gly Ala Asn Pro Lys Asn Ser
                650                 655                 660
      Ala Glu Asn Gln Thr His Gln Thr Phe Leu Thr Val Glu Lys Tyr
                665                 670                 675
      Glu Asp Ser Val Ala Asp Trp Gln Ile Met Tyr Asn Asp Ala Ser
                680                 685                 690
      Trp Glu Thr Arg Phe Tyr Trp His Lys Gly Ile Leu Gly Leu Ser
                695                 700                 705
      Asn Ala Thr Ile Tyr Trp His Ile Pro Asp Thr Ala Tyr Pro Gly
                710                 715                 720
      Ile Tyr Arg Ile Arg Tyr Phe Gly His Asn Arg Lys Gln Glu Leu
                725                 730                 735
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Leu Lys Pro Ala Val Ile Leu Ala Phe Glu Gly Ile Ser Ser Pro
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Phe Glu Val Val Thr Thr
              755
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<210> 14

<211> 682

<212> PRT

<213> Mouse

<400> 14

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Gln Val Ser Asp Ile Asn Leu Met Gly Tyr Gly Lys Asn Gly Gln
              20              25              30
Asn Ala Arg Gly Leu Leu Thr Arg Leu Phe Ser Arg Ala Phe Ile
              35              40              45
Leu Ala Asp Pro Asp Gly Ser Asn Arg Met Ala Phe Val Ser Val
              50              55              60
Glu Leu Cys Met Ile Ser Gln Arg Leu Arg Leu Glu Val Leu Lys
              65              70              75
Arg Leu Glu Ser Lys Tyr Gly Ser Leu Tyr Arg Arg Asp Asn Val
              80              85              90
Ile Leu Ser Ala Ile His Thr His Ser Gly Pro Ala Gly Phe Phe
              95              100             105
Gln Tyr Thr Leu Tyr Ile Leu Ala Ser Glu Gly Phe Ser Asn Arg
              110             115             120
Thr Phe Gln Tyr Ile Val Ser Gly Ile Met Lys Ser Ile Asp Ile
              125             130             135
```

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Ala His Thr Asn Leu Lys Pro Gly Lys Ile Phe Ile Asn Lys Gly
              140             145             150
Asn Val Ala Asn Val Gln Ile Asn Arg Ser Pro Ser Ser Tyr Leu
              155             160             165
Leu Asn Pro Gln Ser Glu Arg Ala Arg Tyr Ser Ser Asn Thr Asp
              170             175             180
Lys Glu Met Leu Val Leu Lys Leu Val Asp Leu Asn Gly Glu Asp
              185             190             195
Leu Gly Leu Ile Ser Trp Phe Ala Ile His Pro Val Ser Met Asn
              200             205             210
Asn Ser Asn His Phe Val Asn Ser Asp Asn Met Gly Tyr Ala Ala
              215             220             225
Tyr Leu Phe Glu Gln Glu Lys Asn Lys Gly Tyr Leu Pro Gly Gln
              230             235             240
Gly Pro Phe Val Ala Gly Phe Ala Ser Ser Asn Leu Gly Asp Val
              245             250             255
Ser Pro Asn Ile Leu Gly Pro His Cys Val Asn Thr Gly Glu Ser
              260             265             270
Cys Asp Asn Asp Lys Ser Thr Cys Pro Asn Gly Gly Pro Ser Met
              275             280             285
Cys Met Ala Ser Gly Pro Gly Gln Asp Met Phe Glu Ser Thr His
              290             295             300
Ile Ile Gly Arg Ile Ile Tyr Gln Lys Ala Lys Glu Leu Tyr Ala
              305             310             315
Ser Ala Ser Gln Glu Val Thr Gly Pro Val Leu Ala Ala His Gln
              320             325             330
Trp Val Asn Met Thr Asp Val Ser Val Gln Leu Asn Ala Thr His
              335             340             345
Thr Val Lys Thr Cys Lys Pro Ala Leu Gly Tyr Ser Phe Ala Ala
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Gly Thr Ile Asp	Gly	Val Ser Gly Leu	Asn	Ile Thr Gln Gly	Thr

	365		370		375
Thr Glu Gly Asp	Pro	Phe Trp Asp Thr	Leu	Arg Asp Gln Leu	Leu

	380		385		390
Gly Lys Pro Ser	Glu	Glu Ile Val Glu	Cys	Gln Lys Pro Lys	Pro

	395		400		405
Ile Leu Leu His	Ser	Gly Glu Leu Thr	Ile	Pro His Pro Trp	Gln

	410		415		420
Pro Asp Ile Val	Asp	Val Gln Ile Val	Thr	Val Gly Ser Leu	Ala

	425		430		435
Ile Ala Ala Ile	Pro	Gly Glu Leu Thr	Thr	Met Ser Gly Arg	Arg

	440		445		450
Phe Arg Glu Ala	Ile	Lys Lys Glu Phe	Ala	Leu Tyr Gly Met	Lys

	455		460		465
Asp Met Thr Val	Val	Ile Ala Gly Leu	Ser	Asn Val Tyr Thr	His

	470		475		480
Tyr Ile Thr Thr	Tyr	Glu Glu Tyr Gln	Ala	Gln Arg Tyr Glu	Ala

	485		490		495
Ala Ser Thr Ile	Tyr	Gly Pro His Thr	Leu	Ser Ala Tyr Ile	Gln

	500		505		510
Leu Phe Arg Asp	Leu	Ala Lys Ala Ile	Ala	Thr Asp Thr Val	Ala

	515		520		525
Asn Met Ser Ser	Gly	Pro Glu Pro Pro	Phe	Phe Lys Asn Leu	Ile

	530		535		540
Ala Ser Leu Ile	Pro	Asn Ile Ala Asp	Arg	Ala Pro Ile Gly	Lys

	545		550		555
His Phe Gly Asp	Val	Leu Gln Pro Ala	Lys	Pro Glu Tyr Arg	Val

	560		565		570

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Gly Glu Val Val Glu Val Ile Phe Val Gly Ala Asn Pro Lys Asn
            575   580   585

Ser Ala Glu Asn Gln Thr His Gln Thr Phe Leu Thr Val Glu Lys
            590   595   600

Tyr Glu Asp Ser Val Ala Asp Trp Gln Ile Met Tyr Asn Asp Ala
            605   610   615

Ser Trp Glu Thr Arg Phe Tyr Trp His Lys Gly Ile Leu Gly Leu
            620   625   630

Ser Asn Ala Thr Ile Tyr Trp His Ile Pro Asp Thr Ala Tyr Pro
            635   640   645

Gly Ile Tyr Arg Ile Arg Tyr Phe Gly His Asn Arg Lys Gln Glu
            650   655   660

Leu Leu Lys Pro Ala Val Ile Leu Ala Phe Glu Gly Ile Ser Ser
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Pro Phe Glu Val Val Thr Thr
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<210> 15

<211> 2049

<212> DNA

<213> Mouse

<400> 15

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agccgtgctt ttatcttggc ggatccagat gggtcaaatc gaatggcatt tgtgagcgtg   180

gaactatgta tgatttccca acgactgagg ttggaggtcc tgaagagact agagagtaaa   240

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